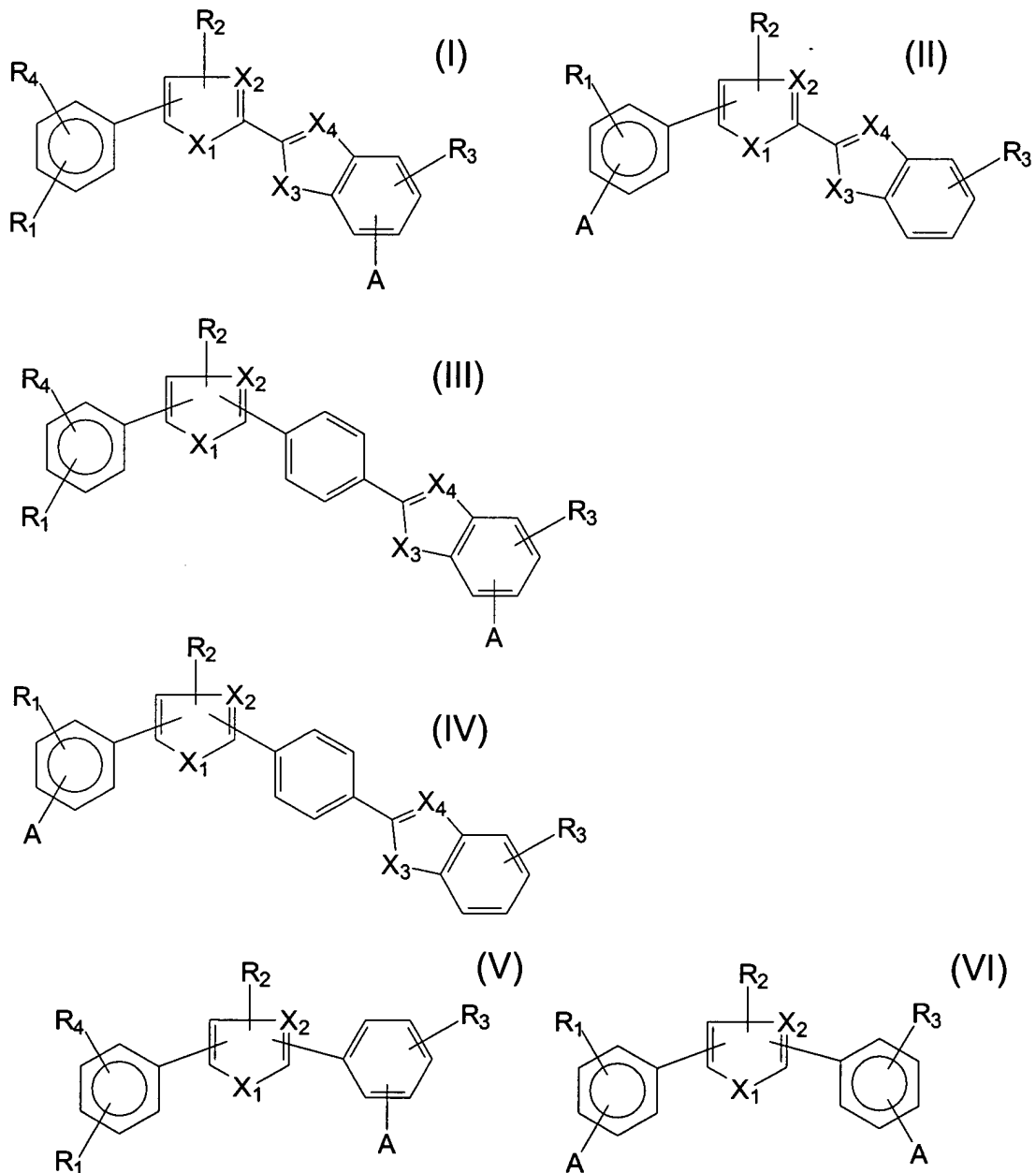


IN THE CLAIMS:

Please add the following new claims:

107. (new) A method of treating a culture for bovine viral diarrhea virus (BVDV) infection, comprising administering to the culture a compound selected from the group consisting of Formula (I)-Formula (VI):

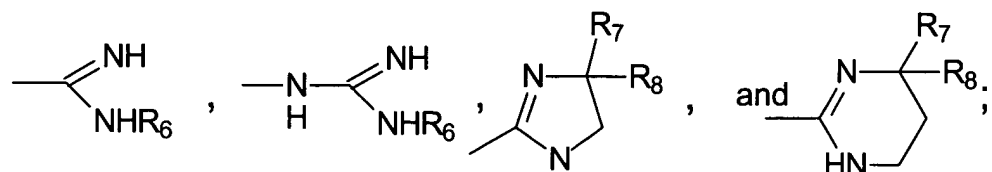


wherein:

X_1 and X_3 are each independently selected from the group consisting of O, S and NR_9 , wherein R_9 is H or alkyl;

X_2 and X_4 are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

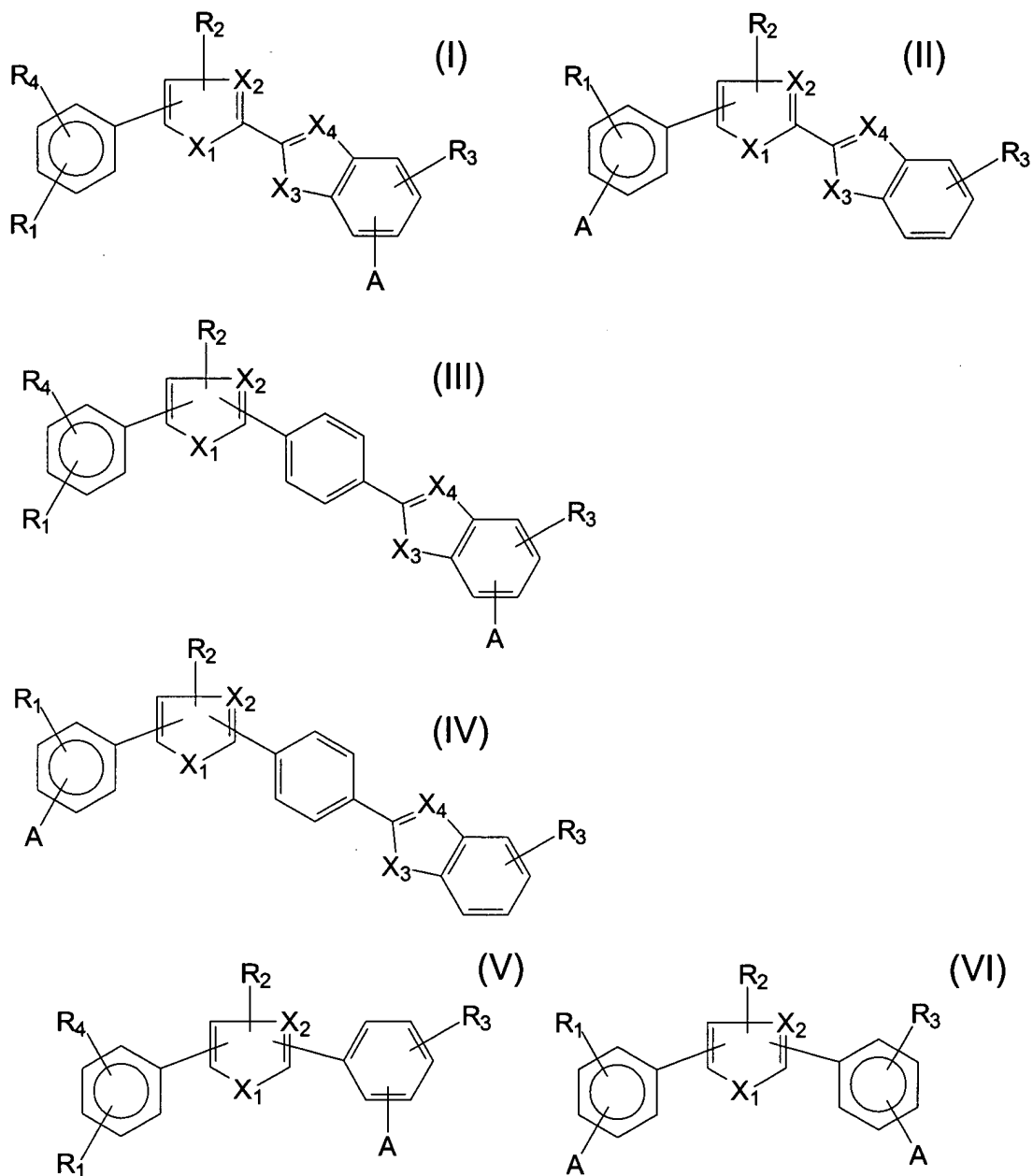


R_1 , R_2 , R_3 , R_4 and R_5 are each independently selected from the group consisting of H, alkyl, alkoxy, amidine, halide, alkylhalide, nitro and amino groups;

R_6 is H, alkyl or aryl; and

R_7 and R_8 are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the BVDV infection.

108. (new) The method of Claim 107, wherein the culture is selected from one of a cell culture and a tissue culture.
109. (new) A method of treating an embryo for bovine viral diarrhea virus (BVDV) infection, comprising administering to the embryo a compound selected from the group consisting of Formula (I)-Formula (VI):

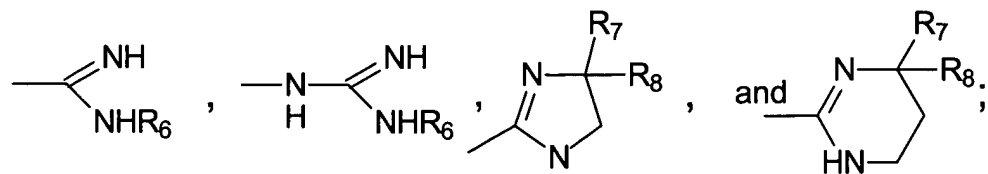


wherein:

X_1 and X_3 are each independently selected from the group consisting of O, S and NR_9 , wherein R_9 is H or alkyl;

X_2 and X_4 are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

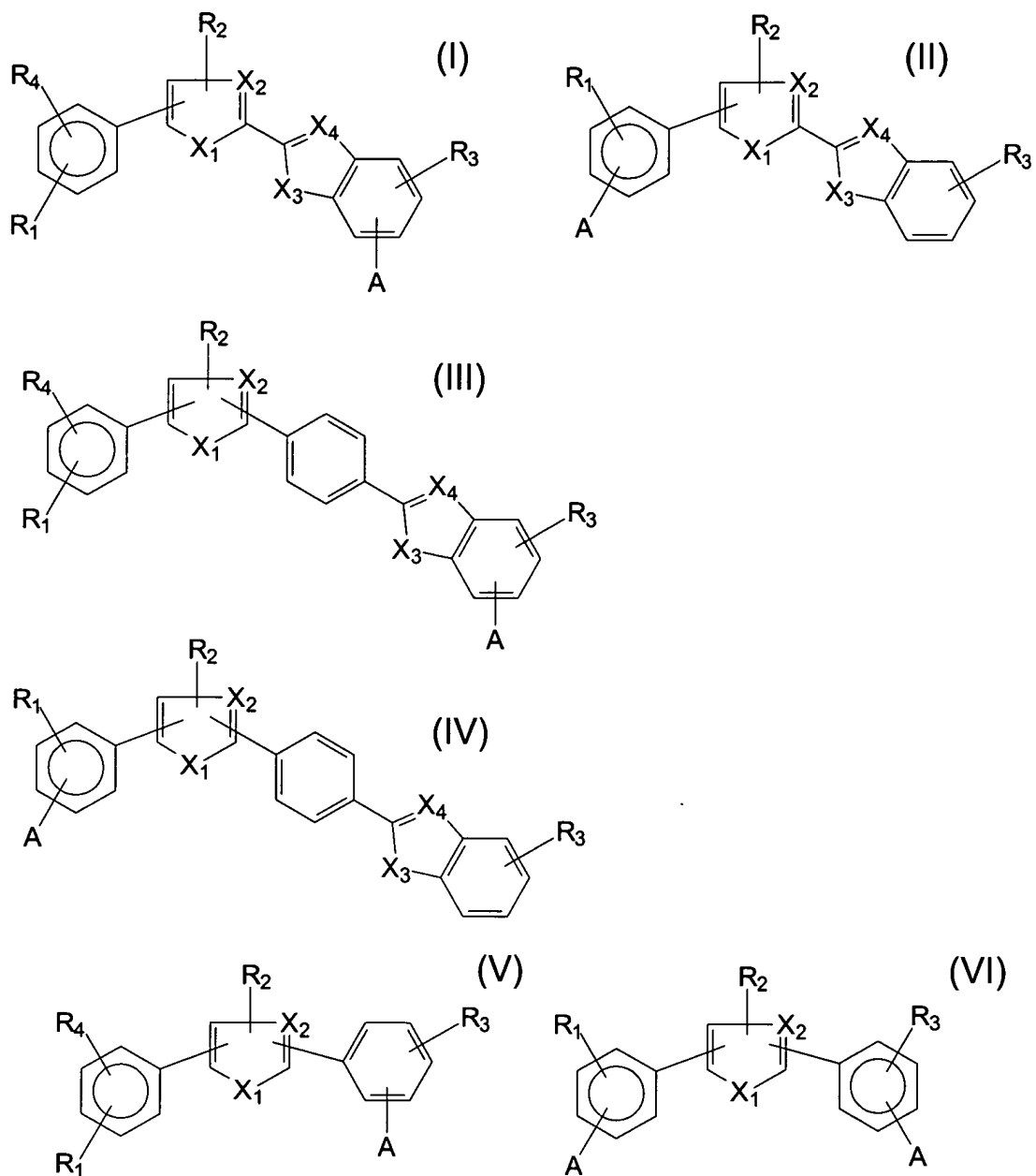


R₁, R₂, R₃, R₄ and R₅ are each independently selected from the group consisting of H, alkyl, alkoxy, amidine, halide, alkylhalide, nitro and amino groups;

R₆ is H, alkyl or aryl; and

R₇ and R₈ are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the BVDV infection.

110. (new) The method of Claim 109, wherein the embryo comprises an *in vitro*-produced embryo.
111. (new) A method of treating bovine viral diarrhea virus (BVDV) in a culture medium surrounding an *in vitro*-produced embryo, comprising administering to the culture medium a compound selected from the group consisting of Formula (I)-Formula (VI):

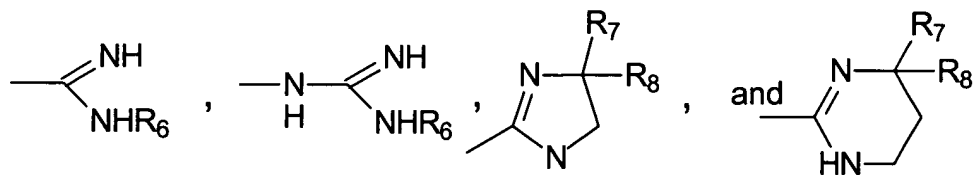


wherein:

X_1 and X_3 are each independently selected from the group consisting of O, S and NR_9 , wherein R_9 is H or alkyl;

X_2 and X_4 are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

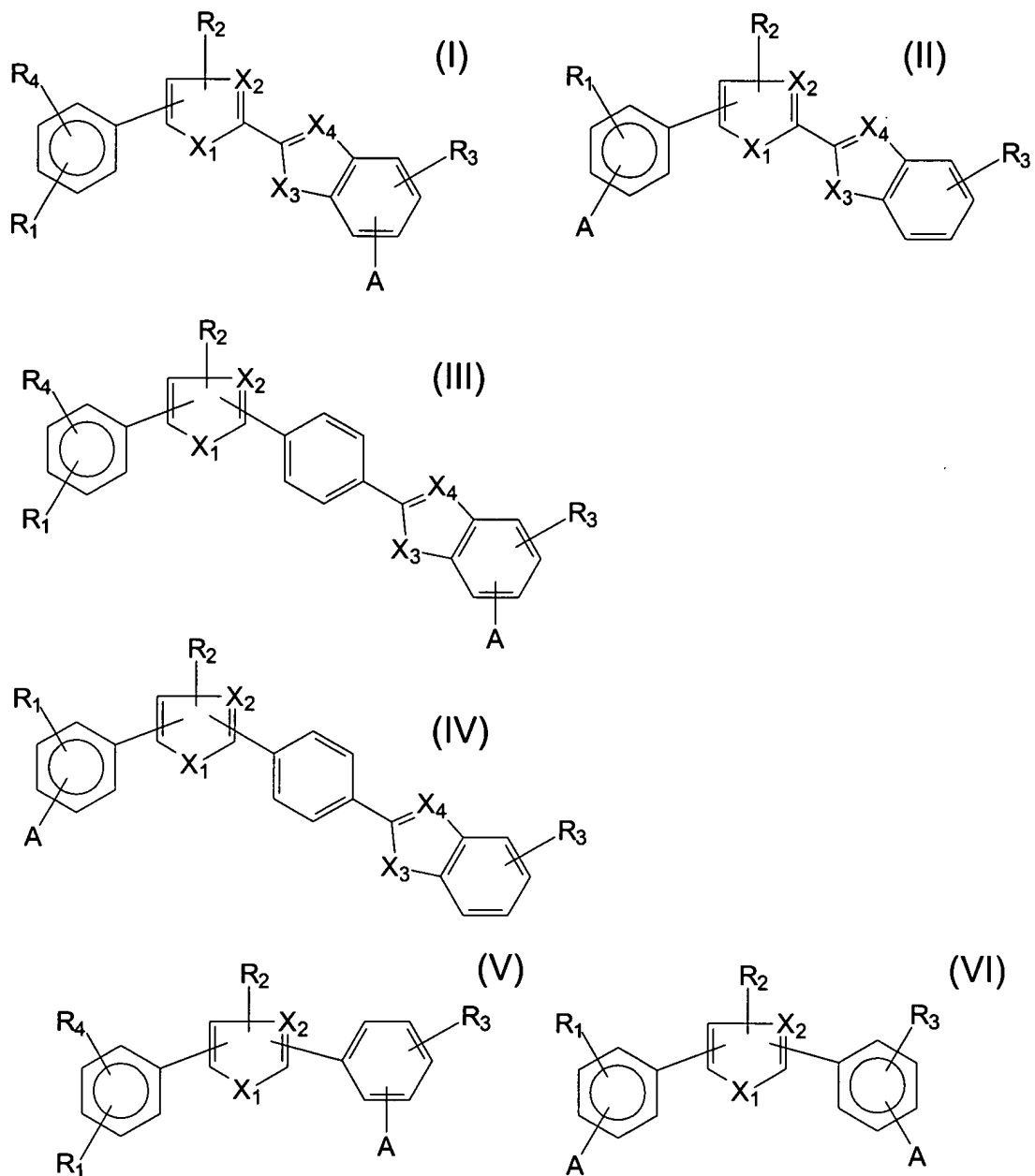


R₁, R₂, R₃, R₄ and R₅ are each independently selected from the group consisting of H, alkyl, alkoxy, amidine, halide, alkylhalide, nitro and amino groups;

R₆ is H, alkyl or aryl; and

R₇ and R₈ are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the BVDV.

112. (new) A method of preparing a biological specimen or medium for use in an *in vitro* fertilization procedure, the method comprising:
- (a) providing the biological specimen or medium; and
 - (b) administering to the biological specimen or medium a compound selected from the group consisting of Formula (I)-Formula (VI):

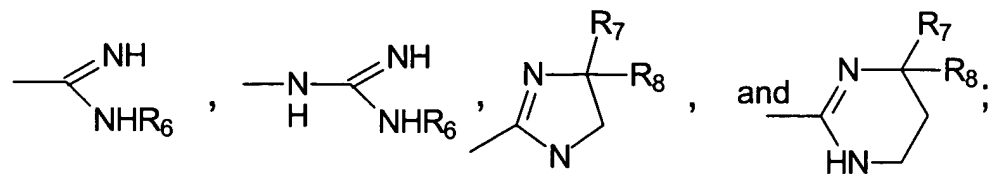


wherein:

X_1 and X_3 are each independently selected from the group consisting of O, S and NR_9 , wherein R_9 is H or alkyl;

X_2 and X_4 are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,



R₁, R₂, R₃, R₄ and R₅ are each independently selected from the group consisting of H, alkyl, alkoxy, amidine, halide, alkylhalide, nitro and amino groups;

R₆ is H, alkyl or aryl; and

R₇ and R₈ are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the biological specimen or medium for a BVDV infection.

113. (new) The method of Claim 112, wherein the biological specimen or medium comprises a gamete, a serum, a somatic cell, an oocyte, a cumulus oocyte complex (COC), an embryo, a culture medium surrounding an embryo, and combinations thereof.